REMARKS/ARGUMENTS

Claims 1, 2, 4-8, 10-14, and 16-26 are currently pending. Claims 1, 7 and 13 have been amended, and claims 21, 23 and 25 have been canceled. Applicants submit that no new matter has been added to the application as a result of the amendments.

Claims 22, 24 and 26 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite.

Claims 1, 2, 4, 7, 8, 10, 13, 14 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0110263 to Shillo (hereinafter "Shillo") in view of U.S. Patent Application Publication No. 2004/0205206 to Naik et al (hereinafter "Naik") and in further view of U.S. Patent Application Publication No. 2003/0131098 to Huntington et al (hereinafter "Huntington").

Claims 5, 6, 11, 12, 17 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik and further view of Huntington and in further view of U.S. Patent Application Publication No. 2003/0135385 to Karpoff (hereinafter "Karpoff").

Claims 19 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik and further view of Huntington in further in view of U.S. Patent Application Publication No. 2003/0236790 to Honmura et al. (hereinafter "Honmura").

Claims 21, 23 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik in view of Huntington and in further view of U.S. Patent No. 6,867,872 to Kurihara et al (hereinafter "Kurihara") and in further view of "Code Cache Management Schemes for Dynamic Optimizers," 2/3/2002, IEEE, Proceedings of the Sixth Annual Workshop on Interaction between Compilers and Computer Architectures, by K. Hazelwood and M.D. Smith, pp. 92-100 (hereinafter "Hazelwood").

Claims 22, 24 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik in view of Huntington and in further view of U.S. Patent No. 6,867,872 to Meir (hereinafter "Meier").

Rejections under 35 U.S.C. 112

Claims 22, 24 and 26 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claim 22 was rejected as indefinite for reciting "the release instructions" and "the assigned bit state table" for which there was insufficient antecedent basis, claim 24 was rejected as indefinite for "the release instructions" and "the assigned state bit map" for which there was insufficient antecedent basis, and claim 26 rejected as indefinite for reciting "the release instructions" and "the assigned state bit map" for which there was insufficient antecedent basis. Applicants have amended claims 22, 24 and 26, and Applicants submit that the amended claims overcome the antecedent basis problems identified in the Office Action.

Accordingly, Applicants respectfully request that the rejections of claims 22, 24 and 26 be withdrawn.

Rejections under 35 U.S.C. 103

Claims 1, 2, 4, 7, 8, 10, 13, 14 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik and in further view of Huntington.

Applicants have amended independent claims 1, 7 and 13 to include features formerly recited in dependent claims 21, 23 and 25, respectively. The Office Action admits that Shillo, Naik and Huntington fail to disclose or suggest all of the features recited in claims 21, 23, and 25. Office Action, pages 24-25. The Office Action instead relied upon Kurihara and Hazelwood to disclose or suggest the remaining features of 21, 23, and 25. For example, amended claim 1 recites, in part, a management server:

> wherein when condition (iii) is met and said management server releases storage areas and assignment areas, said management server:
>
> determines a storage area having a largest number of blocks in which low-priority data is stored, the storage area being of the assignment areas of other servers in which low-priority data is stored, wherein the blocks in which low-priority data is stored comprise contiguous blocks, non-contiguous blocks or a combination of non-contiguous and contiguous blocks of low-priority data;
>
> releases as unassigned area the storage area having the largest number of blocks in which low-priority data is stored;
>
> after releasing the storage area, determines whether the total size of the unassigned areas and the unused areas is at least the size of the storage areas specified by said area assignment instruction;

> wherein if the total size of the total size of the unassigned areas and the unused areas does not exceed the size of the storage areas specified by said area assignment instruction, said management server iteratively performs the steps of determining a storage area, releasing a storage area, and determining whether the total size of the unassigned, the unused areas and the released storage area is at least the size of the storage areas specified by said area assignment instruction until the total size of the total size of the unassigned areas and the unused areas is at least the size of the storage areas specified by said area assignment instruction or no additional storages areas in which low priority data is stored are available.

Applicants submit that even if Shillo, Naik and Huntington were combined with Kurihara and Hazelwood as suggested in the Office Action (even if there was motivation to combine these references), the combination still fails to disclose or suggest at least (1) determining a storage area having a largest number of blocks in which low-priority data is stored; and (2) iteratively performing the steps of determining a storage area, releasing the storage area and determining whether the total size of the unassigned, the unused areas and the released storage area is at least the size of the storage areas specified by said area assignment instruction until the total size of the total size of the unassigned areas and the unused areas is at least the size of the storage areas specified by said area assignment instruction as recited in claim 1.

The Office Action admits that Kurihara fails to teach "determining a storage area having a largest number of blocks in which low-priority data is stored" and instead relies upon relies upon Hazelwood to teach this feature of claim 1. However, Hazelwood merely describes selecting a largest "code trace" (a trace comprises a superblock region of code used as a basis for optimization) to be evicted from a cache in order to minimize the number of evictions that must be performed before a new data element may be added to the cache. Hazelwood, § 2, ¶ 1 and § 4.5. However, merely identifying a largest element in a data cache to be evicted from the cache is not the same thing as "determining a storage area having a largest number of blocks in which low-priority data is stored" as recited in claim 1. The management system of claim 1, in response to an area assignment instruction that exceeds the size of the unassigned areas of one of the plurality of servers, attempts to allocate at least a part of the storage areas assigned to other servers in response to the area assignment instruction. If the management server cannot allocate enough unassigned and/or unused data storage areas from the other servers, the management

server searches for a data storage area assigned to the others servers that has the most low-priority data stored on it and release that data storage area in an attempt to free up sufficient space to satisfy the area assignment instruction. See Specification at page 18, lines 8-page 19, line 6. Hazelwood is silent as to a making such a determination of a storage area in which the most low-priority data is stored.

Furthermore, even if *arguendo*, Hazelwood did teach determining a storage area having a largest number of blocks in which low-priority data is stored (which it does not), Hazelwood fails to teach or suggest "wherein the blocks in which low-priority data is stored comprise contiguous blocks, non-contiguous blocks or a combination of non-contiguous and contiguous blocks of low-priority data." Hazelwood specifically teaches away from considering non-contiguous segments of free space when determining whether the cache has enough space to insert a new entry (Hazelwood, § 3, ¶ 2, lines 4-6), and instead requires either a "low-overhead runtime defragmentation solution" for providing contiguous blocks of free space or a "management scheme that avoids fragmentation with the code cache altogether." Hazelwood, § 3, ¶ 2, lines 9-15. Thus, since all entries in the cache are stored as contiguous segments in the data cache, Hazelwood is limited to identifying contiguous blocks of data for removal in the various methods for selectively identifying and replacing entries in the cache described in sections 4.2-4.6 of Hazelwood.

The Office Action admits that Shillo, Naik and Huntington fail teach at least "iteratively performing the steps of determining a storage area, releasing the storage area and determining whether the total size of the unassigned, the unused areas and the released storage area is at least the size of the storage areas specified by said area assignment instruction until the total size of the total size of the unassigned areas and the unused areas is at least the size of the storage areas specified by said area assignment instruction" as recited in claim 1, and instead relies upon col. 19, lines 5-19 of Kunihara to teach this feature of claim 1. However, the cited portion of Kunihara is merely directed to releasing data of low priority in a font cache buffer, determining if the font cache buffer has sufficient free space to insert new character shape data are releasing the low priority data from the font cache buffer, and releasing additional data until it is determined that enough space is available to insert new character shape data in the font

cache buffer. Kurihara, col. 19, lines 5-19. Kurihara merely describes iteratively releasing low priority data in the font data cache 13 until sufficient space is available to insert new character data. Kurihara, col. 19, lines 5-19. Kurihara is silent as to categorizing portions of the font cache buffer 13 into unassigned areas (areas of storage that are neither assigned to a server nor being used to store data), unused areas (areas of storage that are assigned but are not be used to stored data). In Kurihara, space is the cache is merely occupied by data associated with a character or is free. Therefore, Kurihara also fails to teach or suggest this feature of claim 1.

Applicants further submit that even if *arguendo*, the combination of Shillo, Naik, Huntington, Kurihara and Hazelwood did disclose or suggest all of the features recited in claim 1 (which is does not), one skilled in the art would not be motivated to combine Kurihara and Hazelwood with Shillo, Naik and Huntington. According to MPEP 2143.901, "[o]bviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006)."

Shillo, Naik and Huntington are at least tangentially related to networking and network storage solutions. Shillo is directed to a computer network comprising multiple storage nodes each having a physical storage resource where a system management server on the network identifies the physical storage and collects the physical storage into a virtual storage pool. Shillo, Abstract. Naik is directed to a Resource Management and Reservation System (RMRS) for allocating available storage bandwidth among multiple applications. Naik, Abstract. Huntington is directed to a network capture device that "provide[s] a full time network recording system to record large numbers of packets communicated on a network segment with minimal user intervention, and to provide facilities for retrieval, analysis, diagnostics, translation verification, and evidentiary use." Huntington, ¶ 0005.

The Office Action asserts that Kurihara and Hazelwood are directed to "managing network data storage" and analogous art. However, neither Kurihara nor Hazelwood are directed to management of network data storage as asserted by the Office Action. Kurihara is directed to an image processing apparatus and Hazelwood is directed to a code cache management system for dynamic optimizers (a software-based system that performs code modifications at runtime).

One skilled in the art would not be motivated to combine the image processing apparatus of Kurihara and the code cache management system of Hazelwood with Shillo, Naik and Huntingdon. One skilled in the art would not be motivated to look to art related to image processing apparatuses, such as Kurihara, or art related to a code cache management system of Hazelwood when developing a management server for assigning storage areas in a networked storage environment, such as those recited in the pending claims of the present application.

Accordingly, Applicants respectfully request that the rejection of claims 1, 2, 4, 7, 8, 10, 13, 14 and 16 be withdrawn.

Claims 5, 6, 11, 12, 17 and 18

Claims 5, 6, 11, 12, 17 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik and further view of Huntington and in further view of Karpoff.

Claim 5, 6, 11, 12, 17 and 18 depend from claims 1, 7, and 13, respectively, and the rejection of claims 5, 6, 11, 12, 17 and 18 is premised on the assertion that the combination of Shillo, Naik, and Huntington discloses or suggests the features recited in claims 1, 7, and 13 and Karpoff discloses or suggests the remaining features of claims 1, 7, and 13. As discussed above, however, the combination of Shillo, Naik, and Huntington does not disclose or suggest all of the features recited in claims 1, 7, and 13. As best understood, Karpoff provides no teaching or suggestion that would remedy this deficiency. Therefore, the rejection is based on a flawed premise and cannot be maintained.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 5, 6, 11, 12, 17 and 18.

Claims 19 and 20

Claims 19 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik and further view of Huntington in further in view of Honmura.

Claims 19 and 20 depend from claim 1, and the rejection of claim 1 is premised on the assertion that the combination of Shillo, Naik, and Huntington discloses or suggests the features recited in claim 1 and that Karpoff and Honmura disclose or suggest the remaining

features of claim 1. As discussed above, however, the combination of Shillo, Naik, and Huntington does not disclose or suggest all of the features recited in claim 1. As best understood, Karpoff and Honmura provide no teaching or suggestion that would remedy this deficiency. Therefore, the rejection is based on a flawed premise and cannot be maintained.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 19 and 20.

Claims 21, 23 and 25

Claims 21, 23 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik in view of Huntington and in further view of Kurihara and in further view of Hazelwood.

Claims 21, 23 and 25 have been canceled and the features formerly recited in claims 21, 23, and 25 have been added to claims 1, 7 and 13, respectively. Therefore, the rejection of claims 21, 23 and 25 is now moot.

Claims 22, 24 and 26

Claims 22, 24 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shillo in view of Naik and in further view of Huntington and in further view of Meier.

Claim 22, 24 and 26 depend from claims 1, 7, and 13, respectively, and the rejection of claims 22, 24 and 26 is premised on the assertion that the combination of Shillo, Naik, and Huntington discloses or suggests the features recited in claims 1, 7, and 13 and Meier discloses or suggests the remaining features of claims 1, 7, and 13. As discussed above, however, the combination of Shillo, Naik, and Huntington does not disclose or suggest all of the features recited in claims 1, 7, and 13. As best understood, Meier provides no teaching or suggestion that would remedy this deficiency. Therefore, the rejection is based on a flawed premise and cannot be maintained.

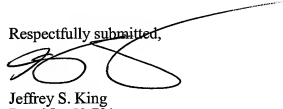
Accordingly, Applicants respectfully request withdrawal of the rejection of claims 22, 24 and 26.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 858-350-6100.

Respectfully submitted,



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